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## RAW SEQUENCE LISTING

DATE: 09/05/2002

PATENT APPLICATION: US/10/043,539

TIME: 09:25:01

Input Set : A:\DC-0199SEQ.txt

Output Set: N:\CRF3\09052002\J043539.raw

3 <110> APPLICANT: Cheung, Ambrose  
 4 Manna, Adar  
 5 Zhang, Gongyi  
 7 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR AFFECTING VIRULENCE  
 DETERMINANTS IN

8 BACTERIA

10 &lt;130&gt; FILE REFERENCE: DC-0199

12 &lt;140&gt; CURRENT APPLICATION NUMBER: US 10/043,539

13 &lt;141&gt; CURRENT FILING DATE: 2002-01-11

15 &lt;150&gt; PRIOR APPLICATION NUMBER: US 60/261,233

16 &lt;151&gt; PRIOR FILING DATE: 2001-01-12

18 &lt;150&gt; PRIOR APPLICATION NUMBER: US 60/261,607

19 &lt;151&gt; PRIOR FILING DATE: 2001-01-12

21 &lt;150&gt; PRIOR APPLICATION NUMBER: US 60/289,601

22 &lt;151&gt; PRIOR FILING DATE: 2001-05-08

24 &lt;160&gt; NUMBER OF SEQ ID NOS: 34

26 &lt;170&gt; SOFTWARE: PatentIn version 3.1

28 &lt;210&gt; SEQ ID NO: 1

29 &lt;211&gt; LENGTH: 947

30 &lt;212&gt; TYPE: DNA

31 &lt;213&gt; ORGANISM: Staphylococcus aureus

33 &lt;220&gt; FEATURE:

34 &lt;221&gt; NAME/KEY: CDS

35 &lt;222&gt; LOCATION: (208)..(552)

36 &lt;223&gt; OTHER INFORMATION:

38 &lt;400&gt; SEQUENCE: 1

39	gttttcaaaa	tcggtggagg	tgcatgaaaa	agttattggg	cattttttga	aaataaaaaa	60
41	atatcaataa	gttggagtca	ttaccgaatt	tttatactta	tttgtttaga	atgaacttta	120
43	taacatagtt	ggatagagtt	ttcgatttaa	tacattaaat	gtgaaccttg	ctacaacaag	180
45	atgtgcatca	gaaggagtgg	tttaata	atg agt	aaa att	aat gat	234
46				Met	Ser	Lys	
47				1	5	Ile	
49	tta gtc	aac gca	aca ttt	caa gtt	aag aag	ttt ttc	282
50	Leu Val	Asn Ala	Thr Phe	Gln Val	Lys Lys	Phe Phe	
51	10	15	20	25			
53	aag aag	ttc aat	ttg aac	tat gaa	gaa att	tat att	330
54	Lys Lys	Phe Asn	Leu Asn	Tyr Glu	Glu Ile	Tyr Ile	
55		30	35	40			
57	tta aga	agt gag	tct aac	gaa atc	tca tct	aaa gag	378
58	Leu Arg	Ser Glu	Ser Asn	Glu Ile	Ser Ser	Lys Glu	
59		45	50	55			
61	tca gag	ttc aaa	cct tac	tat tta	act aaa	gct tta	426
62	Ser Glu	Phe Lys	Pro Tyr	Tyr Tyr	Leu Thr	Lys Ala	
63		60	65	70			

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```

65 gat tta aaa ttg tta tca aag aaa aga agt tta caa gac gaa aga aca      474
66 Asp Leu Lys Leu Leu Ser Lys Lys Arg Ser Leu Gln Asp Glu Arg Thr
67      75      80      85
69 gtt att gtt tat gtt aca gat aca caa aaa gca aat att caa aaa ctg      522
70 Val Ile Val Tyr Val Thr Asp Thr Gln Lys Ala Asn Ile Gln Lys Leu
71 90      95      100      105
73 att tca gaa tta gaa gaa tac att aaa aat taaatcaagg ttaattgcgt      572
74 Ile Ser Glu Leu Glu Glu Tyr Ile Lys Asn
75      110      115
77 ttaataacat tgaacgataa caatttatta atacgaagtt atttattcag cattgggaca      632
79 taaaattaac ttaaaattta aatattgaag atgctttaat taaagttaaa gaccagccat      692
81 accttatttc agcttattta gcttgacaca aggtacacta gtctttttat tttaatatTT      752
83 tcttagaaaa tcaagtttac gatcataaat attttctgcg atatatgcttt ggatgggtcc      812
85 aagtattttc tctataattt gtgtgcgata agcaaaaatt ctaactgcaa aaccatgtgt      872
87 aggcaattga gaaatagcaa cacgacaatc ggatgtattg ctataagaac taatgggttc      932
89 ataaactgaa tcgat      947
92 <210> SEQ ID NO: 2
93 <211> LENGTH: 115
94 <212> TYPE: PRT
95 <213> ORGANISM: Staphylococcus aureus
97 <400> SEQUENCE: 2
99 Met Ser Lys Ile Asn Asp Ile Asn Asp Leu Val Asn Ala Thr Phe Gln
100 1      5      10      15
103 Val Lys Lys Phe Phe Arg Asp Thr Lys Lys Lys Phe Asn Leu Asn Tyr
104      20      25      30
107 Glu Glu Ile Tyr Ile Leu Asn His Ile Leu Arg Ser Glu Ser Asn Glu
108      35      40      45
111 Ile Ser Ser Lys Glu Ile Ala Lys Cys Ser Glu Phe Lys Pro Tyr Tyr
112      50      55      60
115 Leu Thr Lys Ala Leu Gln Lys Leu Lys Asp Leu Lys Leu Leu Ser Lys
116 65      70      75      80
119 Lys Arg Ser Leu Gln Asp Glu Arg Thr Val Ile Val Tyr Val Thr Asp
120      85      90      95
123 Thr Gln Lys Ala Asn Ile Gln Lys Leu Ile Ser Glu Leu Glu Glu Tyr
124      100      105      110
127 Ile Lys Asn
128      115
131 <210> SEQ ID NO: 3
132 <211> LENGTH: 124
133 <212> TYPE: PRT
134 <213> ORGANISM: Staphylococcus aureus
136 <400> SEQUENCE: 3
138 Met Ala Ile Thr Lys Ile Asn Asp Cys Phe Glu Leu Leu Ser Met Val
139 1      5      10      15
142 Thr Tyr Ala Asp Lys Leu Lys Ser Leu Ile Lys Lys Glu Phe Ser Ile
143      20      25      30
146 Ser Phe Glu Glu Phe Ala Val Leu Thr Tyr Ile Ser Glu Asn Lys Glu
147      35      40      45
150 Lys Glu Tyr Tyr Leu Lys Asp Ile Ile Asn His Leu Asn Tyr Lys Gln

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```

151      50      55      60
154 Pro Gln Val Val Lys Ala Val Lys Ile Leu Ser Gln Glu Asp Tyr Phe
155 65      70      75      80
158 Asp Lys Lys Arg Asn Glu His Asp Glu Arg Thr Val Leu Ile Leu Val
159      85      90      95
162 Asn Ala Gln Gln Arg Lys Lys Ile Glu Ser Leu Leu Ser Arg Val Asn
163      100      105      110
166 Lys Arg Ile Thr Glu Ala Asn Asn Glu Ile Glu Leu
167      115      120
170 <210> SEQ ID NO: 4
171 <211> LENGTH: 30
172 <212> TYPE: DNA
173 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Degenerate oligonucleotide.
178 <400> SEQUENCE: 4
179 atgswaaaaa tyaa ygatat yaaygatttt
182 <210> SEQ ID NO: 5
183 <211> LENGTH: 30
184 <212> TYPE: DNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Degenerate oligonucleotide.
190 <400> SEQUENCE: 5
191 attwswytcw swwckyaara trtgrttyaa
194 <210> SEQ ID NO: 6
195 <211> LENGTH: 24
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Synthetic oligonucleotide.
202 <400> SEQUENCE: 6
203 gcatgaaaaa gatatcgggc attt
206 <210> SEQ ID NO: 7
207 <211> LENGTH: 26
208 <212> TYPE: DNA
209 <213> ORGANISM: Artificial Sequence
211 <220> FEATURE:
212 <223> OTHER INFORMATION: Synthetic oligonucleotide.
214 <400> SEQUENCE: 7
215 gtgagtctaa cgatatctca tctaaa
218 <210> SEQ ID NO: 8
219 <211> LENGTH: 14
220 <212> TYPE: PRT
221 <213> ORGANISM: Staphylococcus aureus
223 <220> FEATURE:
224 <221> NAME/KEY: MISC_FEATURE
225 <222> LOCATION: (1)..(1)
226 <223> OTHER INFORMATION: "X" is defined as any amino acid residue.

```

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```

228 <220> FEATURE:
229 <221> NAME/KEY: MISC_FEATURE
230 <222> LOCATION: (13)..(13)
231 <223> OTHER INFORMATION: "X" is defined as being either S or T.
233 <400> SEQUENCE: 8
W--> 235 Xaa Lys Ile Asn Asp Ile Asn Asp Leu Val Asn Ala Xaa Phe
236 1 5 10
239 <210> SEQ ID NO: 9
240 <211> LENGTH: 8
241 <212> TYPE: DNA
242 <213> ORGANISM: Staphylococcus aureus
244 <400> SEQUENCE: 9
245 aggagtgg 8
248 <210> SEQ ID NO: 10
249 <211> LENGTH: 6
250 <212> TYPE: DNA
251 <213> ORGANISM: Staphylococcus aureus
253 <400> SEQUENCE: 10
254 tagaat 6
257 <210> SEQ ID NO: 11
258 <211> LENGTH: 6
259 <212> TYPE: DNA
260 <213> ORGANISM: Staphylococcus aureus
262 <400> SEQUENCE: 11
263 ttaccg 6
266 <210> SEQ ID NO: 12
267 <211> LENGTH: 20
268 <212> TYPE: DNA
269 <213> ORGANISM: Staphylococcus aureus
271 <400> SEQUENCE: 12
272 ttactaaatt aaaaaaatta 20
275 <210> SEQ ID NO: 13
276 <211> LENGTH: 28
277 <212> TYPE: DNA
278 <213> ORGANISM: Staphylococcus aureus
280 <400> SEQUENCE: 13
281 taaattaatg ttatttttta ataattta 28
284 <210> SEQ ID NO: 14
285 <211> LENGTH: 8
286 <212> TYPE: DNA
287 <213> ORGANISM: Staphylococcus aureus
289 <400> SEQUENCE: 14
290 taaattaa 8
293 <210> SEQ ID NO: 15
294 <211> LENGTH: 8
295 <212> TYPE: DNA
296 <213> ORGANISM: Staphylococcus aureus
298 <400> SEQUENCE: 15
299 ataattta 8

```

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Input Set : A:\DC-0199SEQ.txt

Output Set: N:\CRF3\09052002\J043539.raw

```

302 <210> SEQ ID NO: 16
303 <211> LENGTH: 8
304 <212> TYPE: DNA
305 <213> ORGANISM: Staphylococcus aureus
307 <400> SEQUENCE: 16
308 taaattat 8
311 <210> SEQ ID NO: 17
312 <211> LENGTH: 20
313 <212> TYPE: DNA
314 <213> ORGANISM: Staphylococcus aureus
316 <400> SEQUENCE: 17
317 ttactaaatt aaaaaaatta 20
320 <210> SEQ ID NO: 18
321 <211> LENGTH: 49
322 <212> TYPE: DNA
323 <213> ORGANISM: Staphylococcus aureus
325 <400> SEQUENCE: 18
326 tcttaagacc taaattaatg ttatTTTTta ataatttaca ccaaattaa 49
329 <210> SEQ ID NO: 19
330 <211> LENGTH: 210
331 <212> TYPE: DNA
332 <213> ORGANISM: Staphylococcus aureus
334 <400> SEQUENCE: 19
335 gttttcaaaa tcggtggagg tgcataaaaa agttattggg cattttttga aaataaaaaa 60
337 atatcaataa gttggagtca ttaccgaatt tttatactta tttgtttaga atgaacttta 120
339 taacatagtt ggatagagtt ttcgatttaa tacattaaat gtgaaccttg ctacaacaag 180
341 atgtgcatca gaaggagtgg tttaataatg 210
344 <210> SEQ ID NO: 20
345 <211> LENGTH: 29
346 <212> TYPE: DNA
347 <213> ORGANISM: Staphylococcus aureus
349 <400> SEQUENCE: 20
350 ctaaattaat gttatTTTTt aataattta 29
353 <210> SEQ ID NO: 21
354 <211> LENGTH: 3
355 <212> TYPE: DNA
356 <213> ORGANISM: Staphylococcus aureus
358 <400> SEQUENCE: 21
359 aaa 3
362 <210> SEQ ID NO: 22
363 <211> LENGTH: 20
364 <212> TYPE: DNA
365 <213> ORGANISM: Staphylococcus aureus
367 <400> SEQUENCE: 22
368 aattaccttg tattgtcgat 20
371 <210> SEQ ID NO: 23
372 <211> LENGTH: 22
373 <212> TYPE: DNA
374 <213> ORGANISM: Staphylococcus aureus

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/043,539

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Input Set : A:\DC-0199SEQ.txt  
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:8; Xaa Pos. 1,13

Seq#:26; Xaa Pos. 2,4,10,15,16,17,19,20,24,25,31,38,44,45,47,51,52,58,59,61

Seq#:26; Xaa Pos. 73,77,78,86,87,95,97,99,102,106,110,114,117,118,120

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/043,539

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Input Set : A:\DC-0199SEQ.txt

Output Set: N:\CRF3\09052002\J043539.raw

L:235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
L:533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:16  
L:541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:32  
L:545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:48  
L:549 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:64  
L:553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:80  
L:557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:96  
L:561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:112